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ALCATEL FIT No. 103468 "Thermal Compensation of Fibre Bragg Gratings"

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Abstract

The present invention relates to a fibre grating filter optical waveguide device, comprising an optical fibre consisting essentially of silica, whereby said optical fibre has an area with a diffractive grating region and wherein said area with a diffractive grating region is covered with a material having a negative thermal expansion coefficient α satisfying the following equation:

$$\alpha = - (dn_{\text{eff}}/dT) / n_{\text{eff}}$$

wherein dn_{eff} / dT is the thermo-optic coefficient of the fibre material and n_{eff} is the effective refractive index. Furthermore, the present invention provides a method of manufacturing such a device.

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